

**Claims:**

1. A recombinant Moloney murine leukemia virus reverse transcriptase, wherein the glutamine at the position of 84<sup>th</sup> amino acid from the N-terminus, is replaced with amino acid X, which is an amino acid with side chain shorter than that of glutamine.
2. The reverse transcriptase of claim 1, wherein the aspartic acid at the position of 524<sup>th</sup> amino acid, is replaced with amino acid asparagine.
3. The reverse transcriptase of claim 1 and 2, wherein the amino acid X is alanine, serine, aspartic acid or asparagine.
4. The reverse transcriptase of claim 3, wherein the amino acid X is alanine.
5. The sequence encoding the reverse transcriptase of claim 1.
6. A method for expressing the recombinant murine leukemia reverse transcriptase. In this method, the expression vector carrying the coding sequence of the said reverse transcriptase is transformed into E. coli. Positive clones are picked to express the recombinant reverse transcriptase. The said reverse transcriptase is referred to as the MLV reverse transcriptase with the glutamine at the position of the 84<sup>th</sup> amino acid replaced with amino acid X, which is an amino acid with side chain shorter than that of glutamine.
7. The method of claim 6, wherein the amino acid aspartic acid at the position of 524<sup>th</sup> amino acid from the N-terminus is replaced with asparagine.
8. The method of claim 7, wherein the amino acid X is alanine.
9. The method of claim 8, wherein the sequence of the expression plasmid is listed in table 1.
10. The methods of claims 6, 7, 8 and 9, wherein the said E.coli strain is BL21.